

K123973

APR 23 2013

## 1.4 510(k) SUMMARY

The following 510(K) Summary is being submitted as required by 21CFR 807.92(a).

### Submitter Information

Company: PEGAVISION CORPORATION  
2F-1 No.5, Shing Yeh St. Shan Ding Vil. Kwei Shan Hsiang,  
Taoyuan Hsien 333, Taiwan

Contact Person: Mr. Tony Hsu, President

Phone: 886-3-329-8808

Fax: 886-3-329-8897

E-Mail: [tonyhsu@pegavision.com.tw](mailto:tonyhsu@pegavision.com.tw)

Date Prepared: Dec. 17, 2012

### Identification of Device

Trade Name: Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic)  
Contact Lenses  
Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic)  
Contact Lenses

Common Name: Soft (hydrophilic) Contact Lenses (daily wear)

Classification Name: Lenses, Soft Contact, Daily Wear 21CFR. 886.5925,  
Product Code LPL  
Lenses, Soft Contact (Disposable), 21CFR. 886.5925,  
Product Code MVN

FDA Classification: Class II

### Indication for use

Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses are indicated for daily wear for vision correction of refractive ametropia in aphakic or not-aphakic persons with non-diseased eyes that are myopic or hyperopic. The lens may be worn by persons who exhibit refractive astigmatism of 2.00 diopters (D) or less where the astigmatism does not interfere with visual acuity. The lens may be

prescribed in spherical powers ranging from +20.00D to -20.00D.

Eye Care Practitioners may prescribe the lens for frequent/planned replacement wear with cleaning, rinsing, disinfection and scheduled replacement as prescribed by the eye care professional. When prescribed for frequent/planned replacement wear, the lens may be disinfected using a chemical (not heat) lens care system only.

Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses help protect against transmission of harmful UV radiation to the cornea and into the eye.

### Description of Device

Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses are available as spherical lenses manufactured by cast molding method. The model illuminated with water content of 38%. These hydrogel lens materials are homo-polymer of 2-hydroxyethyl methacrylate (HEMA) crosslinked with ethylene glycol dimethacrylate (EGDMA) via photo-polymerization. These lenses are tinted blue using C.I. reactive blue 19 to make them more visible for handling. These lenses contain UV blocker, a benzotriazole UV absorbing monomer to block UV radiation. The average transmittance characteristics of theses lenses are less than 5 % in the UV range of 280-315 nm and less than 50% in the UVA range of 316-380nm. Lenses are supplied sterile in sealed blister package containing sterile isotonic borate buffered saline solution.

### Summary of Clinical Study

Polymacon lenses have been used widely. Its safety and effectiveness have been well documented. Their safety and effectiveness can be further exemplified by two lenses cleared by FDA

- Soflens Multifocal (Polymacon) Visibility Tinted Contact lens, K 020927  
Submitted by Bausch & Lomb Inc.
- Frequency 38 (Polymacon) Soft (hydrophilic) Contact Lens, K 042824,  
submitted by Cooper Vision Inc.

Clinical studies for Aquamx (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses are not required for the premarket notification as the USAN name and process are the same as the above mentioned predicate devices.

## Non-clinical Study

All tests were conducted in accordance with the May 1994 FDA guideline title Premarket Notification 510(K) Guidance Document for Class IV Contact Lenses.

The non-clinical performance tests had been performed to demonstrate the safety and effectiveness of Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses and establish substantial equivalence to predicate lenses Soflens Multifocal (Polymacon) Visibility Tinted Contact Lens (K020927); and Frequency 38 (Polymacon) Soft (Hydrophilic) Contact Lens (K042824). The evidence of substantial equivalence to the predicate lenses is described below.

### a) Technological characteristics studies

The technological characteristics of Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses are illustrated in the following Table.

Characteristics	Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lens	Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lens	Soflens Multifocal (Polymacon) Visibility Tinted Contact Lens	Frequency 38 (Polymacon) Soft (hydrophilic) Contact Lens
FDA Group	Group I < 50 % water, non- ionic polymer	Group I < 50 % water, non- ionic polymer	Group I < 50 % water non-ionic polymer	Group I < 50 % water Non-ionic polymer
USAN Name	Polymacon	Polymacon	Polymacon	Polymacon
Production Method	Cast molding	Cast molding	Cast molding	Cast molding
Water content	38 %	38 %	38 %	38 %
Refractive Index	1.43	1.43	1.43	1.43
Oxygen permeability (edge corrected) @35 °C	$12.1 \times 10^{-11}$ ( $\text{cm}^2/\text{sec}$ )(mL $\text{O}_2/\text{mL-mmHg}$ )	$12.1 \times 10^{-11}$ ( $\text{cm}^2/\text{sec}$ )(mL $\text{O}_2/\text{mL-mmHg}$ )	$10.3 \times 10^{-11}$ ( $\text{cm}^2/\text{sec}$ )(mL $\text{O}_2/\text{mL-mmHg}$ )	$8.0 \times 10^{-11}$ ( $\text{cm}^2/\text{sec}$ )(mL $\text{O}_2/\text{mL-mmHg}$ )

Characteristic	Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses	Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses	Soflens Multifocal (Polymacon) Visibility Tinted Contact Lens (K020927)	Frequency 38 (Polymacon) Soft (hydrophilic) Contact Lens (K042824)
Power(Diopter)	+20.00 to -20.00 D	+20.00 to -20.00 D	+ 20.00 to -20.00D	+ 20.00 to -20.00D
% T at 593 nm	> 95 %	> 95 %	> 96 %	> 97 %
% T at 380-316 nm	< 50 %	< 50 %	-	-
% T at 315-280 nm	< 5 %	< 5 %	-	-

The oxygen permeability data for predicate Frequency 38 lenses were copied from 510(K) summary of respective lens. Actual measurement of oxygen permeability for Soflens Multifocal gave substantially equivalent value within error of measurement.

**b) Biocompatibility**

The standard cytotoxicity, maximization sensitization and ocular irritation tests were carried out for both Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses and negative responses were recorded for all tests. The validity of blister package for lenses was demonstrated by passing the standard extraction tests.

**c) Microbiology**

Steam sterilization process had been validated to deliver a minimum SAL of  $10^{-6}$ , thereby complying with the requirement of FDA group IV. There is shelf-life stability supporting that these lenses remain sterile through the expiration date claimed for the product.

**d) Bacteriostatic Validation**

The steam sterilizer was tested for effectiveness by measuring and demonstrating the uniformity of temperature at different location inside the sterilizer over test period. Tested microorganisms were killed under tested conditions as compared to control.

Lenses remained sterilized and there was no microbial growth for a period of 5

years tested under accelerated condition. Seal of lens packages remained tight for a period of 5 years as demonstrated by the constant peeling strength tested under accelerated condition.

**e) Leachability**

Studies were conducted to determine the leachable materials from the finished lenses. The results show that, at the levels of the detection reported, there are no leachable monomers and additive residues.

**Substantial Equivalence Statement**

In conclusion, it is PEGAVISION's conviction that data submitted in this 510(K) to validate the claim of substantial equivalency, substantiates our ability to manufacture soft contact lenses, the Aquamax (Polymacon) Quarterly Disposable Soft (Hydrophilic) Contact Lenses and Aquamax (Polymacon) Monthly Disposable Soft (Hydrophilic) Contact Lenses, with the same established safety profile and effectiveness as the predicate devices -Soflens Multifocal (Polymacon) Visibility Tinted Contact Lens via K020927 and Frequen 38 (Polymacon) Soft (Hydrophilic) Contact Lens via K042824.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

April 23, 2013

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

Pegavision Corporation  
% Mr. Tony Hsu  
President  
2F-A No. 5 Shing Yeh St.  
Shan Ding Vil.  
Taoyuan, Kwei Shan Hsiang  
China (Taiwan) 33341

Re: K123973

Trade/Device Name: Aquamax (polymacon) Quarterly Disposable Soft (hydrophilic)  
Contact Lens; Aquamax (polymacon) Monthly Disposable Soft  
(hydrophilic) Contact Lens

Regulation Number: 21 CFR 886.5925

Regulation Name: Soft (hydrophilic) contact lens

Regulatory Class: Class II

Product Code: LPL, MVN

Dated: March 18, 2013

Received: March 19, 2013

Dear Mr. Hsu:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

 Deborah M. Falls -S

for Malvina B. Eydelman, M.D.  
Director  
Division of Ophthalmic, and Ear,  
Nose and Throat Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

K123973

## Indications for Use

510(k) Number (if known): K123973

Device Name: Aquamax (polymacon) Quarterly Disposable Soft (hydrophilic) Contact Lenses, Aquamax (polymacon) Monthly Disposable Soft (hydrophilic) Contact Lenses

Indications for Use:

Aquamax (polymacon) Quarterly Disposable Soft (hydrophilic) Contact Lenses and Aquamax (polymacon) Monthly Disposable Soft (hydrophilic) Contact Lenses are indicated for daily wear for vision correction of refractive ametropia in aphakic or not-aphakic persons with non-diseased eyes that are myopic or hyperopic. The lens may be worn by persons who exhibit refractive astigmatism of 2.00 diopters (D) or less where the astigmatism does not interfere with visual acuity. The lens may be prescribed in spherical powers ranging from +20.00 D to -20.00 D. Eye practitioners may prescribe the lens for frequent/planned replacement wear with cleaning, rinsing, disinfection and scheduled replacement as prescribed by the eye care professional. When prescribed for frequent/planned replacement wear, the lens may be disinfected using a chemical (not heat) lens care system only.

Lenses help protect against transmission of harmful UV radiation to the cornea and into the eye.

Prescription Use X  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

---

Concurrence of CDRH, Office of Device Evaluation (ODE)

Joseph C. Hutter, S  
2013.04.18 14:15:15 -04'00'

(Division Sign-Off)  
Division of Ophthalmic and Ear, Nose  
and Throat Devices

510(k) Number K123973